

STEAM TURBINES

low-pressure stages of the turbine and the condenser without interfering with the low-pressure steam supply. If the demand for low-pressure steam is interrupted, the turbine should work as a simple high-pressure condensing machine. Suitable valve gear is required to ensure that the turbine adapts itself to the varying conditions under which it may be required to work.

Fig. 47 shows a section through a Curtis pass-out turbine built by Messrs. The British Thomson-Houston Company. It will be seen that the construction is similar to that of their high-pressure condensing turbines, with the addition of the necessary valve gear to control the admission of steam

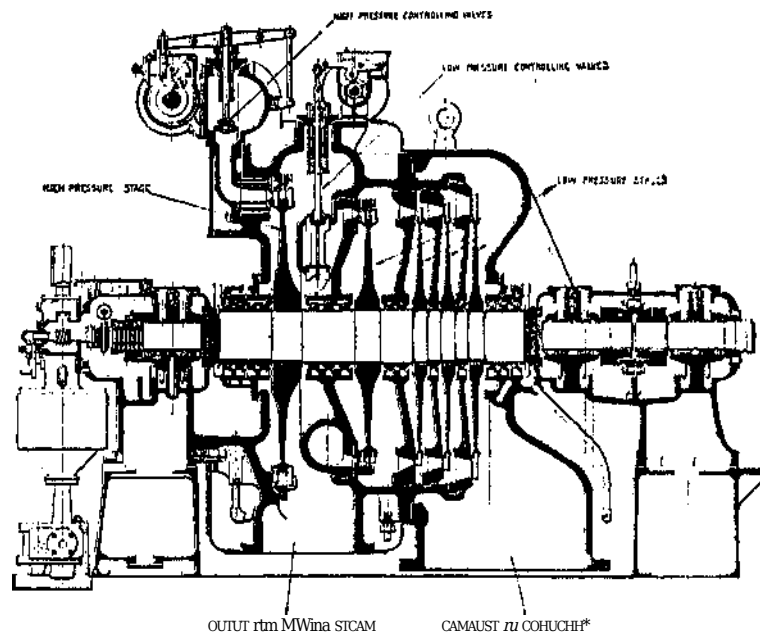


Fig. 47.—Sectional Elevation of Curtis Pass-out Turbine, built by The British Thomson-Houston Co., Ltd.,

to the low-pressure stages, and of a suitable outlet provided for the supply of heating steam.

The British Thomson-Houston Co., Ltd., have developed a patented automatic valve gear which enables a constant speed to be maintained with a constant load independently of any fluctuation in the demand for heating steam.

This gear is generally very similar to the valve gear used on mixed-pressure turbines, the low-pressure valves being multiple equilibrium valves operated by a rotating servo-motor and cam gear, with a pressure regulator of similar construction to that used on low-pressure steam.

The high- and low-pressure valves are connected to the

speed governor,
to the pressure regulator, and to each other in such a way
that change of
speed produced by a change of load will move both high- and
low-pressure
valves in the same direction, either to open or to shut as may
be required. On
the other hand, an alteration in the quantity of heating
steam will produce